

REMARKS

This responds to the Office Action mailed on July 15, 2008. Claims 8-28 are currently pending. Claims 8-18 and 27 stand rejected, claims 19-26 stand allowed, and claim 28 is new. No claims have been amended in this response. In view of the following remarks, Applicant respectfully submits that the application is in complete condition for allowance and requests reconsideration in this regard.

Rejections under § 102

Claims 8-12, 14-15, and 27 stand rejected as being anticipated by Patterson (U.S. Patent No. 5,234,026). Of this group, claims 8 and 27 are the only independent claims. Applicant respectfully submits that Patterson fails to teach or suggest each and every element of claims 8 and 27 for the reasons set forth below.

The present application relates to a pressure regulator designed to alleviate pressure build-ups when a dispenser is shut off. As shown in Fig. 4 of the application, the pressure regulator includes a housing 12 having a fluid inlet 16, a first partial volume 14 communicating with the fluid inlet 16, a second partial volume 24 communicating with the first partial volume 14 through a channel 22 in a valve seat 23, and a fluid outlet 26 communicating with the second partial volume 24. A valve in the form of a piston 32 moves within the first partial volume 14 between an open position spaced from the valve seat 23 and a closed position in contact with the valve seat 23. Another piston 54 includes a piston rod 56 configured to extend through the valve seat 23 to contact a sealing surface 40 of the piston 32. The piston 54 is configured to move with the piston 32 between the open and closed positions when the piston rod 56 is in contact with the sealing surface 40, but can also move away from the piston 32 when the piston 32 is in

the closed position to bring piston rod 56 out of contact with the sealing surface 40. A piston disc 58 defining at least a portion of the second partial volume 24 above the valve seat 23 is coupled to the piston rod 56 so as to move therewith. Thus, when the piston rod 56 moves away from the piston 32, the second partial volume 24 expands to alleviate high pressures.

Claim 8 recites a housing having first and second partial volumes, "a valve seat defining at least a portion of said first partial volume," and "a channel extending through said valve seat and communicating with said first and second partial volumes." A valve (e.g., piston 32) is movable "between an open and closed position within said first partial volume." The valve "includes a sealing surface adapted to contact said valve seat in said closed position so as to seal off said channel from said first partial volume." The claimed apparatus also includes "a piston having a piston disc defining at least a portion of said second partial volume and a piston rod extending through said channel." The piston rod is "adapted to engage said sealing surface of said valve so as to move therewith." Thus, there are two separate components—the valve and the piston—movable within the housing. These components only move together when the piston rod engages the sealing surface of the valve.

In contrast to claim 8, Patterson discloses a pressure regulator without any piston engaging a sealing surface of a valve. As shown in Fig. 1 of Patterson, a housing 11 includes a bore 15, a valve seat 22 secured within the bore 15, an inlet passage 54 communicating with the bore 15 on a first side of the valve seat 22, and an outlet passage 53 communicating with the bore 15 on a second side of the valve seat 22. A valve stem 33 extends through a passage 43 in the valve seat 22. The valve stem 33 is

configured to move between an open position wherein a sealing member 37 (Fig. 4) on the valve stem 33 is spaced from the valve seat 22 to allow the flow of fluid through the passage 43, and a closed position wherein the sealing member 37 abuts the valve seat 22 to seal off the passage 43. Although a piston 18, 47 moves with the valve stem 33, there is no piston rod associated with the piston 18, 47 "adapted to engage said sealing surface" of the valve stem 33, as recited in claim 8. Indeed, the piston 18, 47 is coupled to the end of the valve stem 33, far removed from the sealing member 37 that contacts the valve seat 22.

Applicant respectfully submits that the Examiner's rejection of claim 8 does not take into account these structural differences. The Examiner asserts:

Patterson shows a pressure regulator with a piston 18 sealing against piston 15, and connected to a valve and stem 33. The valve is biased closed by a spring 34. A second partial volume includes cylindrical chamber 52, intermediate portion 58, and outlet portion 40, 53. Office Action mailed July 15, 2008, p. 2.

Nowhere, however, does the Examiner indicate that the piston 18 or any other structure includes a "piston rod adapted to engage [a] sealing surface" of the valve stem 33 with the sealing surface being "adapted to contact said valve seat," as recited in claim 8.

For at least these reasons, Applicant respectfully submits that Patterson fails to teach or suggest every element of claim 8. Therefore, Applicant requests that the rejection of claim 8 and its dependent claims 9-12 and 14-15 as anticipated by Patterson be withdrawn.

Claim 27 recites a method that involves using components arranged in the same manner recited in claim 8. For example, claim 27 recites a housing including "a first partial volume having a valve seat with a channel extending therethrough," a valve

movable within the first partial volume and "having a sealing surface adapted to contact the valve seat when the valve is in a closed position," and a piston "having a piston rod extending through the channel and adapted to engage the sealing surface such that actuating the piston moves the valve into an open position." Applicant respectfully submits that the arguments presented above with respect to claim 8 apply equally to claim 27. Therefore, Applicant requests that the rejection of claim 27 be withdrawn for at least the above reasons as well.

Rejections under § 103

The Examiner issued several rejections under 35 U.S.C. § 103(a), all of which depend, at least in part, on Patterson. For example, claims 10 and 11 stand rejected as being unpatentable over Patterson in view of Semon (U.S. Patent No. 3,643,683). Claim 13 stands rejected as being unpatentable over Patterson in view of Ono (U.S. Patent No. 5,159,952). Claim 16 stands rejected as being unpatentable over Patterson. Finally, claims 17 and 18 stand rejected as being unpatentable over Patterson in view of Armstrong (U.S. Patent No. 2,105,681). Each of these rejected claims depends from independent claim 8, directly or indirectly. Applicant respectfully submits that none of the additional references cited by the Examiner cure the deficiencies of Patterson discussed above with respect to claim 8. Indeed, the Examiner merely asserts that the additional references disclose features of the dependent claims rather than the arrangement of components recited in claim 8. For at least this reason, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness and requests that the rejections under 35 U.S.C. § 103(a) be withdrawn.

New Claim

Claim 28 has been added to recite another "apparatus for regulating the pressure of fluid supplied to a dispenser." The apparatus includes a housing having the same arrangement recited in claim 8. Rather than reciting the valve and piston, however, claim 28 recites a first piston and second piston being independently movable when the first piston closes the channel through the valve seat. More specifically, claim 28 recites "a first piston movable within said first partial volume between an open position in which said first piston is spaced from said valve seat and a closed position in which said first piston contacts said valve seat to seal off said channel from said first partial volume." Claim 28 also recites "a second piston having a piston disc defining at least a portion of said second partial volume and a piston rod configured to extend through said channel and engage said first piston, said piston rod being movable with said first piston when said first piston moves between said open and closed positions but independently movable relative to said first piston when said first piston is in said closed position." The piston disc is "coupled to said piston rod such that said second partial volume increases or decreases when said piston rod moves." Applicant respectfully submits that such an arrangement is neither taught nor suggested by the references of record.

Conclusion

Applicant respectfully submits that the foregoing is a full and complete response to the Office Action mailed on July 15, 2008. If the Examiner believes any matter requires further discussion, the Examiner is respectfully invited to telephone the undersigned attorney so that the matter may be promptly resolved.

Applicant believes that no fees are due in connection with this response. However, if such petition is due or any additional fees are necessary, the Commissioner may consider this to be a request for such and charge any necessary fees to deposit account 23-3000.

Respectfully submitted,

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